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=> fil reg
FILE 'REGISTRY' ENTERED AT 13:50:22 ON 05 SEP 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:    3 SEP 2004  HIGHEST RN 739335-06-9
DICTIONARY FILE UPDATES:   3 SEP 2004  HIGHEST RN 739335-06-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d sta que l18
L16             STR
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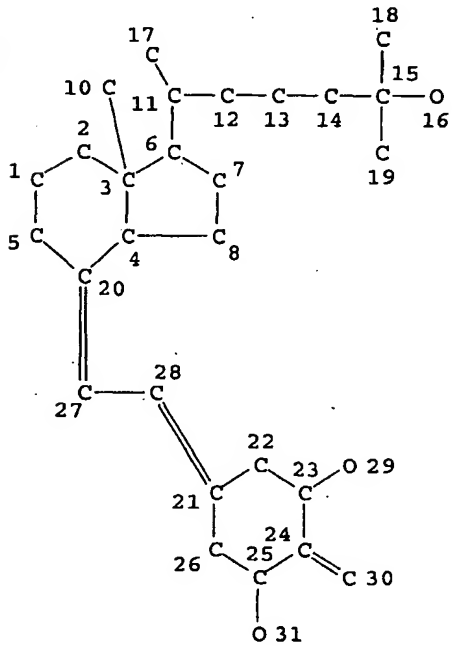


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NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  30

STEREO ATTRIBUTES: NONE
L18             3 SEA FILE=REGISTRY FAM FUL L16
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100.0% PROCESSED     15 ITERATIONS                    3 ANSWERS
SEARCH TIME: 00.00.01


=> d his

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               SET COST OFF

     FILE 'HCAPLUS' ENTERED AT 13:41:00 ON 05 SEP 2004
               E PLUM L/AU
L1           22 S E3,E4,E6,E7
               E CLAGETTE M/AU
L2            1 S E2
               E CLAGETTE D/AU
               E DAME M/AU
L3           12 S E3,E4,E6-E8
               E DELUCA H/AU
L4         1160 S E3,E6-E10
               E DE LUCA H/AU
L5           38 S E5,E6
L6         1213 S L1-L5

     FILE 'REGISTRY' ENTERED AT 13:42:24 ON 05 SEP 2004

     FILE 'HCAPLUS' ENTERED AT 13:42:24 ON 05 SEP 2004
               SET SMARTSELECT ON
L7          SEL L6 1- RN :    2546 TERMS
               SET SMARTSELECT OFF

     FILE 'REGISTRY' ENTERED AT 13:43:02 ON 05 SEP 2004
L8         2546 S L7
L9          729 S L8 AND C6/ES AND C5-C6/ES AND 3/NR
L10         294 S L9 AND 3/O
L11          92 S L10 AND 27/C
L12          54 S L11 AND 44/H
L13          23 S L12 AND 1 3 25 TRIOL
L14           2 S L13 AND 2 METHYLENE
L15          52 S L12 NOT L14
L16             STR
L17           0 S L16 FAM SAM
L18           3 S L16 FAM FUL
               SAV L18 QAZI782/A
L19           3 S L14,L18

     FILE 'HCAOLD' ENTERED AT 13:48:18 ON 05 SEP 2004
L20           0 S L18

     FILE 'HCAPLUS' ENTERED AT 13:48:23 ON 05 SEP 2004
L21          22 S L18
L22          19 S L21 AND L6
L23           3 S L21 NOT L22
L24          22 S L21-L23
L25           0 S L24 AND LIFE(L)EXPECT?
L26           0 S L24 AND LONGEV?
               E LONGEVITY/CT
               E E3+ALL
L27           1 S L24 AND E3+OLD,NT,PFT,RT
L28          22 S L24,L27

     FILE 'USPATFULL, USPAT2' ENTERED AT 13:50:06 ON 05 SEP 2004
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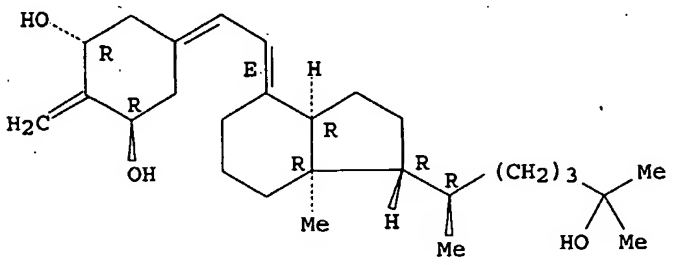
L29 24 S L18

FILE 'REGISTRY' ENTERED AT 13:50:22 ON 05 SEP 2004

=> d ide can tot l18

L18 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2004 ACS on STN
RN 235108-14-2 REGISTRY
CN 19-Nor-9,10-secocholesta-5,7-diene-1,3,25-triol, 2-methylene-, (1α,3β,7E,14β)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C27 H44 O3
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.
Double bond geometry as shown.



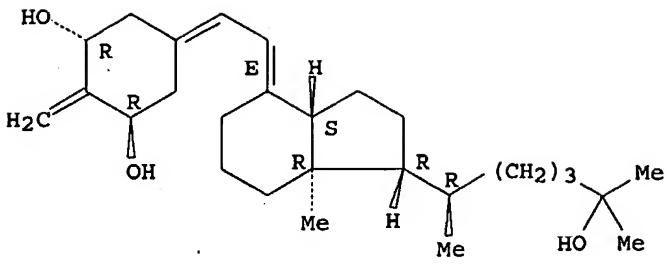
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:144749

L18 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2004 ACS on STN
RN 213319-29-0 REGISTRY
CN 19-Nor-9,10-secocholesta-5,7-diene-1,3,25-triol, 2-methylene-, (1α,3β,7E)- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1,3-Cyclohexanediol, 2-methylene-5-[(2E)-[(1R,3aS,7aR)-octahydro-1-[(1R)-5-hydroxy-1,5-dimethylhexyl]-7a-methyl-4H-inden-4-ylidene]ethylidene]-, (1R,3R)-
FS STEREOSEARCH
MF C27 H44 O3
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); PRP (Properties); RACT (Reactant or reagent)

Absolute stereochemistry.
Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

10 REFERENCES IN FILE CA (1907 TO DATE)
11 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:247113

REFERENCE 2: 139:271426

REFERENCE 3: 136:401925

REFERENCE 4: 136:112696

REFERENCE 5: 135:358086

REFERENCE 6: 135:304063

REFERENCE 7: 135:288953

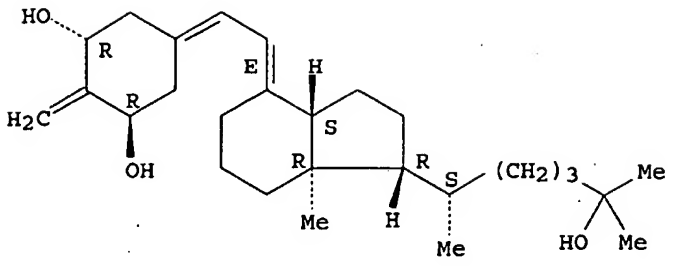
REFERENCE 8: 133:267021

REFERENCE 9: 130:52625

REFERENCE 10: 129:245332

L18 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2004 ACS on STN
RN 213250-70-5 REGISTRY
CN 19-Nor-9,10-secocholesta-5,7-diene-1,3,25-triol, 2-methylene-, (1α,3β,7E,20S)- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1,3-Cyclohexanediol, 2-methylene-5-[(2E)-[(1R,3aS,7aR)-octahydro-1-[(1S)-5-hydroxy-1,5-dimethylhexyl]-7a-methyl-4H-inden-4-ylidene]ethylidene]-, (1R,3R)-
FS STEREOSEARCH
MF C27 H44 O3
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

Absolute stereochemistry.
Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

15 REFERENCES IN FILE CA (1907 TO DATE)
19 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:386155

REFERENCE 2: 140:13126

REFERENCE 3: 139:317525

REFERENCE 4: 139:271459

REFERENCE 5: 138:50247

REFERENCE 6: 136:401925

REFERENCE 7: 136:335278

REFERENCE 8: 136:112696

REFERENCE 9: 135:358086

REFERENCE 10: 135:304063

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 13:50:36 ON 05 SEP 2004
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FILE COVERS 1907 - 5 Sep 2004 VOL 141 ISS 11
FILE LAST UPDATED: 3 Sep 2004 (20040903/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all hitstr l27

L27 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:71881 HCAPLUS
DN 136:112696
ED Entered STN: 25 Jan 2002
TI Use of 2-methylene-19-nor-20(S)-1α,25-dihydroxyvitamin D3 to increase bone strength and for the treatment of skin disease, cancer, and bone disease
IN **Deluca, Hector F.**; Smith, Connie M.
PA Wisconsin Alumni Research Foundation, USA
SO PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-59
CC 1-12 (Pharmacology)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002005823	A2	20020124	WO 2001-US21706	20010710
	WO 2002005823	A3	20020523		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1301189	A2	20030416	EP 2001-957115	20010710
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	BR 2001012454	A	20030729	BR 2001-12454	20010710
	JP 2004505022	T2	20040219	JP 2002-511755	20010710
	US 2004068129	A1	20040408	US 2003-673629	20030929
PRAI	US 2000-616164	A	20000714		
	WO 2001-US21706	W	20010710		

CLASS

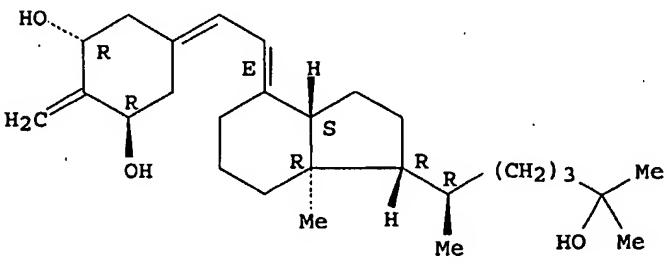
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002005823	ICM	A61K031-59
JP 2004505022	FTERM	4C086/AA01; 4C086/AA02; 4C086/DA16; 4C086/GA16; 4C086/MA01; 4C086/MA04; 4C086/NA14; 4C086/ZA89; 4C086/ZA96; 4C086/ZA97; 4C086/ZB26
US 2004068129	ECLA	A61K007/48C4D

AB The invention provides pharmaceutical uses for 2-methylene-19-nor-20(S)-1α,25-dihydroxyvitamin D3. This compound is characterized by high bone calcium mobilization activity demonstrating preferential activity on bone. This results in a novel therapeutic agent for the treatment of diseases where bone formation is desired, particularly osteoporosis. This compound also exhibits pronounced activity in arresting the proliferation of undifferentiated cells and inducing their differentiation to the monocyte, thus evidencing use as an anticancer agent and for the treatment of skin diseases such as psoriasis. This compound also increases both breaking strength and crushing strength of bones evidencing use in conjunction with bone replacement surgery such as hip and knee replacements.
ST methylenenordihydroxyvitamin D3 bone strength; cancer psoriasis bone disease methylenenordihydroxyvitamin D3; skin disease osteoporosis methylenenordihydroxyvitamin D3; hip knee replacement methylenenordihydroxyvitamin D3

IT Animal cell line
(HL-60; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Mineral elements, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(bone; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Biological transport
(calcium; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Intestine, neoplasm
(colon, inhibitors; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Antitumor agents
(colon; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Cell differentiation
(inducers; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Antitumor agents
(leukemia; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Osteoporosis
(low bone turnover osteoporosis; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Antitumor agents
(mammary gland; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Monocyte
Osteomalacia
Psoriasis
(methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Vitamin D receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Bone
(minerals; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Mammary gland
Prostate gland
(neoplasm, inhibitors; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Drug delivery systems
(oral; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Bone, disease
(osteopenia; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Drug delivery systems
(parenterals; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Osteoporosis
(postmenopausal; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Myelocyte
(promyelocyte; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Antitumor agents
(prostate gland; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)

IT Bone, disease
(renal osteodystrophy; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT **Aging, animal**
(senile osteoporosis; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Steroids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(steroid-induced osteoporosis; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Bone
(strength; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Osteoporosis
(therapeutic agents; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Drug delivery systems
(topical; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT Drug delivery systems
(transdermal; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT 32222-06-3, 1α,25-Dihydroxyvitamin D3 **213319-29-0**
RL: PAC (Pharmacological activity); BIOL (Biological study)
(methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT **213250-70-5**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT 7440-70-2, Calcium, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(transport; methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
IT **213319-29-0**
RL: PAC (Pharmacological activity); BIOL (Biological study)
(methylenenordihydroxyvitamin D3 to increase bone strength and for treatment of skin disease, cancer, and bone disease)
RN 213319-29-0 HCAPLUS
CN 19-Nor-9,10-secocholesta-5,7-diene-1,3,25-triol, 2-methylene-, (1α,3β,7E)- (9CI) (CA INDEX NAME)

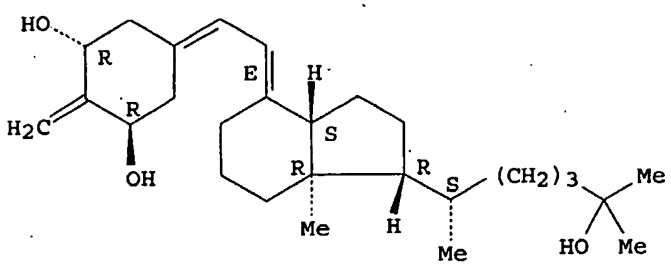
Absolute stereochemistry.
Double bond geometry as shown.



IT **213250-70-5**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methylenenordihydroxyvitamin D3 to increase bone strength and for

treatment of skin disease, cancer, and bone disease)
RN 213250-70-5 HCAPLUS
CN 19-Nor-9,10-secocholesta-5,7-diene-1,3,25-triol, 2-methylene-, (1α,3β,7E,20S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



=> s l28 not l27
L30 21 L28 NOT L27

=> d bib abs hitstr retable tot

L30 ANSWER 1 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:522177 HCAPLUS
TI Model of three-dimensional structure of VDR bound with Vitamin D3 analogs substituted at carbon-2
AU Sicinska, Wanda; Rotkiewicz, Piotr; **DeLuca, Hector F.**
CS Department of Biochemistry, University of Wisconsin-Madison, Madison, WI, 53706, USA
SO Journal of Steroid Biochemistry and Molecular Biology (2004), 89-90(1-5), 107-110
CODEN: JSBBEZ; ISSN: 0960-0760
PB : Elsevier Science Ltd.
DT Journal
LA English
AB All Vitamin D analogs possessing the A ring modified at C-2 and showing calcemic activities nest themselves in the VDR binding pocket, oriented towards Tyr 143. Such topol. resembles the position of the Vitamin D hormone in hVDRmt [Proc. Natl. Acad. Sci. U.S.A. 98 (2001) 5491]. Conversely, inactive 2β-methyl-19-nor-analogs anchor the receptor cavity in a distinguishably different manner, namely by their side chain. Moreover, these inactive vitamins have a different conformation around C(6)-C(7) bond. Topol. of modeled complexes suggests that a Vitamin D analog will be biol. active if its intercyclic 5,7-diene moiety assumes parallel position to tryptophan aromatic rings; such orientation allows for creating π-π interactions. The broad comparison of calcemic activities of the analogs, and their interactions with VDR, revealed that specific hydrophobic contacts are involved in bone calcium mobilization (BCM). These contacts occur between 21-Me group and a few amino acids (V296, L305 and L309), conserved in the nuclear receptor superfamily. In the inactive 2β-methyl-19-nor analogs such contacts do not exist. We speculate that two hydrophobic receptor patches, being in close contact with ligand Me groups, might influence interaction with co-modulators involved in calcium homeostasis.
IT **213250-70-5 213319-29-0**
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(model of three-dimensional structure of VDR bound with Vitamin D3